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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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EXAMINER

KHARE, DEVESH

ART UNIT

PAPER NUMBER

1623

DATE MAILED: 02/11/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/082,555

Applicant(s)

LANGLOIS, BRUNO

Examiner

Devesh Khare

Art Unit

1623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 22-37 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 22-37 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2. 6) ☐ Other:

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Claims 22-37 are currently pending in this application.

Applicant is requested to format the instant application using the headings correlative to the topics set forth below. This will facilitate clarity should the application be allowed and printed.

Content of Specification

- (a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.
- (b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.
- (c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.
- (d) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.

Or alternatively, Reference to a "Microfiche Appendix": See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.
- (e) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:
 - (1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."

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- (2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."
- (f) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.
- (g) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.
- (h) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.
- (i) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet (37 CFR 1.52(b)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).

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- (j) Abstract of the Disclosure: See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if an abstract was published with the international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).
- (k) Sequence Listing. See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431. The requirement for a sequence listing applies to all sequences disclosed in a given application, whether the sequences are claimed or not. See MPEP § 2421.02.

Minor objections

Claim 33 is objected to because of the following informalities:

Claim 33, line 2, duplication of the phrase "further comprises".

Appropriate correction is required.

35 U.S.C. 112, second paragraph rejection

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 24 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 24 recites "percentage is 0 to 2%", but claim 22 recites "xanthan gum having a percentage of acetyl groups in the range 0 to 3%", it is unclear as to whether it refers to percentage of acetyl groups or the xanthan gum.

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35 U.S.C. 103(a) rejection

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 22 -37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doherty et al. (EP 0765939) in view of Patton (GB 1,080,248).

The claims 22-37 are directed to a process for oil extraction comprising the step of using, at a temperature between 100 and 140⁰ C, a guar free drilling fluid comprising a xanthan gum having a percentage of acetyl groups in the range 0 to 3%, said xanthan gum in the form of a polypentamer, at least one compound which increases the ionic strength of the fluid, and at least one fluid loss control agent. Additional claim limitations include the addition of a thinner or dispersing agent (claim 31), a weighting compound (claim 34), at least one mineral colloid (claim 35), and water (claim 36).

Doherty et al. (Doherty) teach a solution of non-acetylated xanthan, 1000 ppm of xanthan in 50,000 ppm NaCl brine (see p 10, example 7). The non-acetylated xanthan is disclosed as a viscofying agent for aqueous solutions, particularly for use in oil recovery. Doherty disclose that the rheological property of deacetylated xanthan, that is, being a better viscosifier than native xanthan (see p 4, lines 13-17 and 31-34). The

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drilling fluid according to the instant invention may be used at a temperature of up to 140⁰ C, however, Doherty teach in the examples that the xanthan gum solution viscosities were measured over the temperature range of 25⁰ to about 80⁰ C which does not indicate that 80⁰ is the maximum temperature that the composition can withstand. While the Doherty teach a non-acetylated xanthan gum solution comprising, in addition to water, the xanthan gum and a NaCl brine, Doherty differ from applicant's process for oil extraction in that Doherty do not suggest the use of a fluid loss control agent in the process. Doherty does not teach the use of other additives recited in dependent claims. However, Doherty does suggest the use of additives typically used in solutions with utility in the field of enhanced oil recovery. Use of a known member of a class of materials in a process is not patentable if other members of the class were known to be useful for that purpose, even though results are better than expected.

Patton et al. disclose the use of carbohydrates produced by the genus *Xanthomonas*, xanthan gum, in drilling fluids in the process for drilling of oil wells. The precipitation step involved in the preparation of these carbohydrates that leads to deacetylation (p 2, lines 95-100). Patton et al. disclose the use of additives : weighting compounds such as barium sulfate ; mineral colloids such as bentonite ; and fluid loss control agents such as carboxymethylcellulose (p 3, lines 89-128). It is noted that Patton et al. does not provide specific disclosures regarding the use of a xanthan gum having a percentage of acetyl groups in the range 0 to 3% and said xanthan gum in the form of a polypentamer.

Therefore, one of ordinary skill in the art would have found the applicants claimed process for oil extraction comprising the step of using, at a temperature between 100 and 140⁰ C, a guar free drilling fluid comprising a xanthan gum having a percentage of acetyl groups in the range 0 to 3%, to have been obvious at the time the invention was made having the above cited references before him, since Doherty et al. teach the use of non-acetylated xanthan as a viscosifying agent for aqueous solutions, particularly for use in oil recovery and Patton et al., teach the use of use additives in drilling fluids: weighting compounds such as barium sulfate ; mineral colloids such as bentonite ; and fluid loss control agents such as carboxymethylcellulose, one skilled in the art would have a reasonable expectation for success in combining both references to accomplish a process for oil extraction comprising the step of using, at a temperature between 100 and 140⁰ C, a guar free drilling fluid comprising a xanthan gum, at least one compound which increases the ionic strength of the fluid, and at least one fluid loss control agent. The motivation for doing so is provided by Doherty et al., which suggests the use of xanthan gum in petroleum drilling fluids (see p2, lines 11-12).

State of the Art References

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The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sandiford (U.S. Patent 4,069,869)- discloses the heteropolysaccharides produced by genus Xanthomonas used in enhanced oil recovery.

Estes et al. (U.S. Patent 6,133,203)- discloses the drilling fluids and additives thereof.

Robinson et al. (U.S. Patent 5,236,046)- discloses the use of heteropolysaccharides as a mobility control in oil recovery.

Dawson et al. (U.S. Patent 6,387,853)- discloses the derivatization of polymers and well treatments.

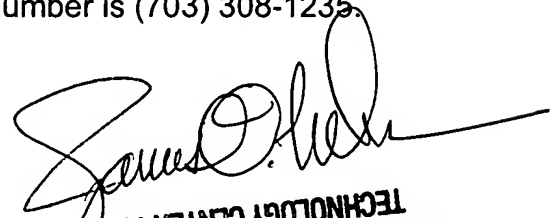
Any inquiry concerning this communication or earlier communications from the

Examiner should be directed to Devesh Khare whose telephone number is (703)605-

1199. The examiner can normally be reached on Monday to Friday from 8:00 to 4:30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James O. Wilson, Supervisory Patent Examiner, Art Unit 1623 can be reached at 703-308-4624. The official fax phone numbers for the organization where this application or proceeding is assigned is (703) 308-4556 or 308-4242.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1235.

Devesh Khare, Ph.D.,JD(3Y).
Art Unit 1623
February 4,2003


JAMES O. WILSON
SUPERVISORY PATENT EXAMINER
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